JVC

No. 2335

SERVICE MANUAL

MODEL JL-B44

DIRECT DRIVE TURNTABLE

SPECIFICATIONS

MOTOR AND TURNTABLE

Motor:	8-pole 24-slot DC servo-controlled motor
Drive System:	Direct-drive system
Speeds:	33-1/3 and 45 rpm
Variable Speed Range:	Within ±3.0% (both for 33-1/3 and 45 rpm)
Wow & Flutter:	Less than 0.05% (WRMS)
Signal-to-Noise Ratio:	Better than 60dB
Platter:	31cm-diameter die-cast aluminum alloy (Weight: 1.6 kg)

TONEARM

Type:	Statically-balanced S-shaped tubular arm with JVC-developed TH balancing system
Effective Arm Length:	245mm
Tracking Error:	Less than ±1°30'
Overhang:	15mm
Stylus Pressure Range:	0 to 3 grams (Steps by 0.1 gram)
Usable Cartridge Weight Range:	12 to 32 grams (Including Head Shell)
Adjustable Arm Height Range:	43 to 52mm

FEATURES

Anti-skating, arm lifter, cue lever, stroboscope, low-capacity output signal cable, etc.

BASE

Type:	41-ply beechwood laminate
Adjustable Base Height Range:	10mm
Dust Cover:	Smoked acryl plastic

GENERAL

Power Source:	AC 120V 60Hz only (U.S.A. & Canada) (AC 220V 50Hz only (Switzerland & Scandinavian) AC 240V 50Hz only (Australia & U.K.) AC 100, 120, 220 or 240V (Selectable) 50/60Hz
Power Consumption:	5W (50Hz), 4.5W (60Hz)
dimensions:	Height x Width x Depth = 7-1/2 x 19-3/8 x 16-1/4 inches or 19 x 49 x 41 cm
Weight:	28.6 lbs or 13 kg (net)

VICTOR COMPANY OF JAPAN, LIMITED

TONEARM ADJUSTMENT

ADJUSTING STYLUS PRESSURE (Fig. 1)

1. Remove the arm from its rest, being careful not to damage the stylus tip. If the anti-skating weight is removed from its holder the tonearm will not tend to move towards the center of the record and it will be easier to adjust to zero balance.
2. Turn the main weight in either direction to achieve zero balance; this is when the tonearm is balanced with the stylus tip at the level of the record surface.
3. Put the arm back on its rest and clamp it in place.
4. Hold the main weight so that it does not move and turn the scale ring so that its "O" mark is aligned with the index line on the weight shaft. If the main weight is allowed to move at this time the correct stylus pressure will not be obtained.
5. Turn the main weight clockwise (this moves it forward) being careful not to touch the scale ring. The scale ring turns with the main weight; match the stylus pressure required with the index line on the weight shaft. Fig. 3 shows the setting for a stylus pressure of 2 g.

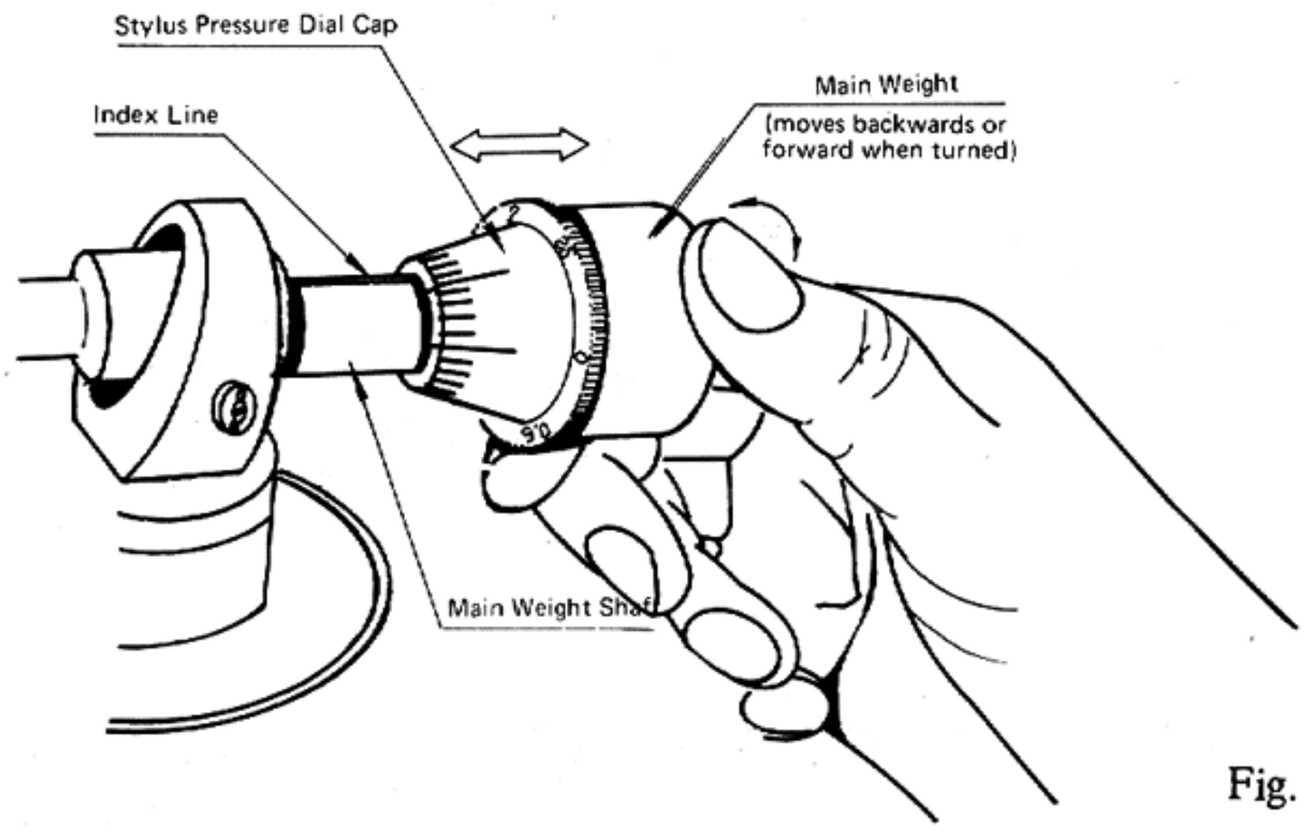


Fig. 1

ANTI-SKATING ADJUSTMENT (Fig. 2)

1. The anti-skating device must be adjusted according to the stylus pressure of the cartridge being used. Attach the loop on the string attached to the anti-skating weight to one of the grooves in the anti-skating bar as shown in Fig. 3.
2. The anti-skating bar has three grooves; the inner one is for a stylus pressure of 1.5 g and the center one is for a stylus pressure of 2.0 g.
   If you are using a cartridge which requires a stylus pressure of less than 1.5 g, remove the anti-skating weight.

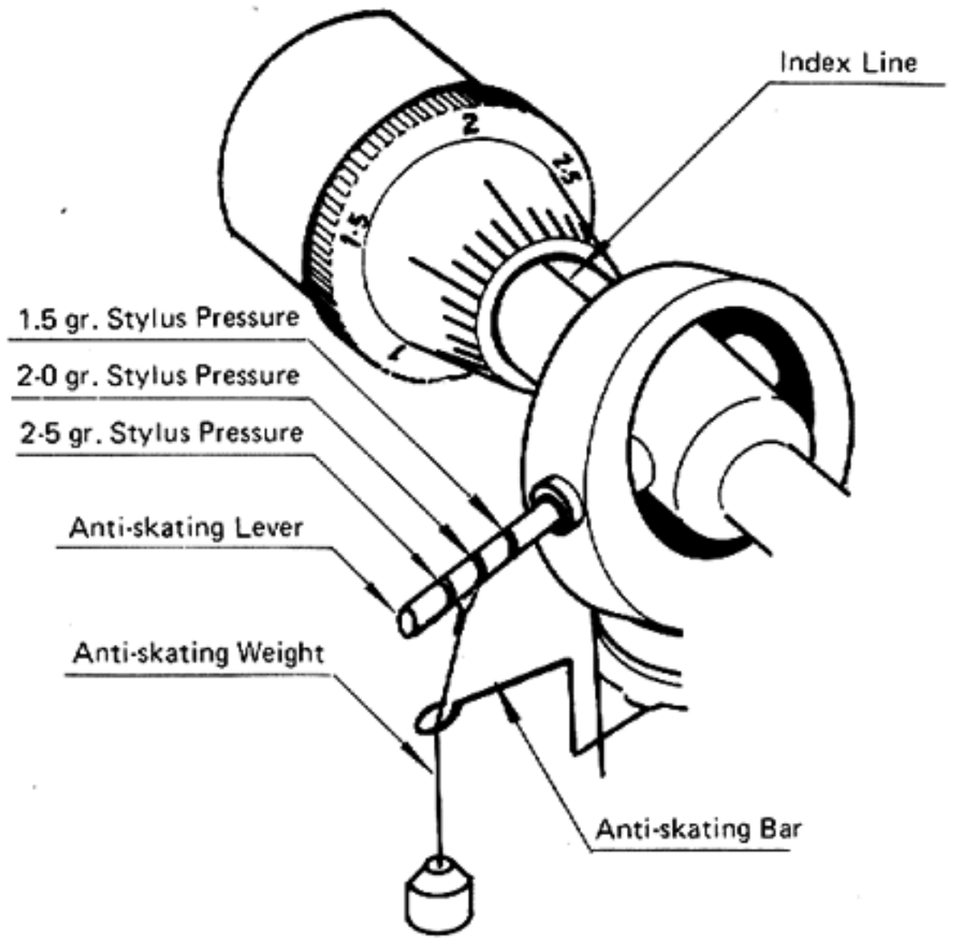


Fig. 2

FINE ADJUSTMENT OF HEADSHELL INCLINATION (Fig. 3)

The stylus should be perpendicular to the record surface; if it is not, loosen the fixing screws with the screw-driver provided, rotate the headshell and tighten the screws. It is sufficient to estimate the perpendicularity visually.

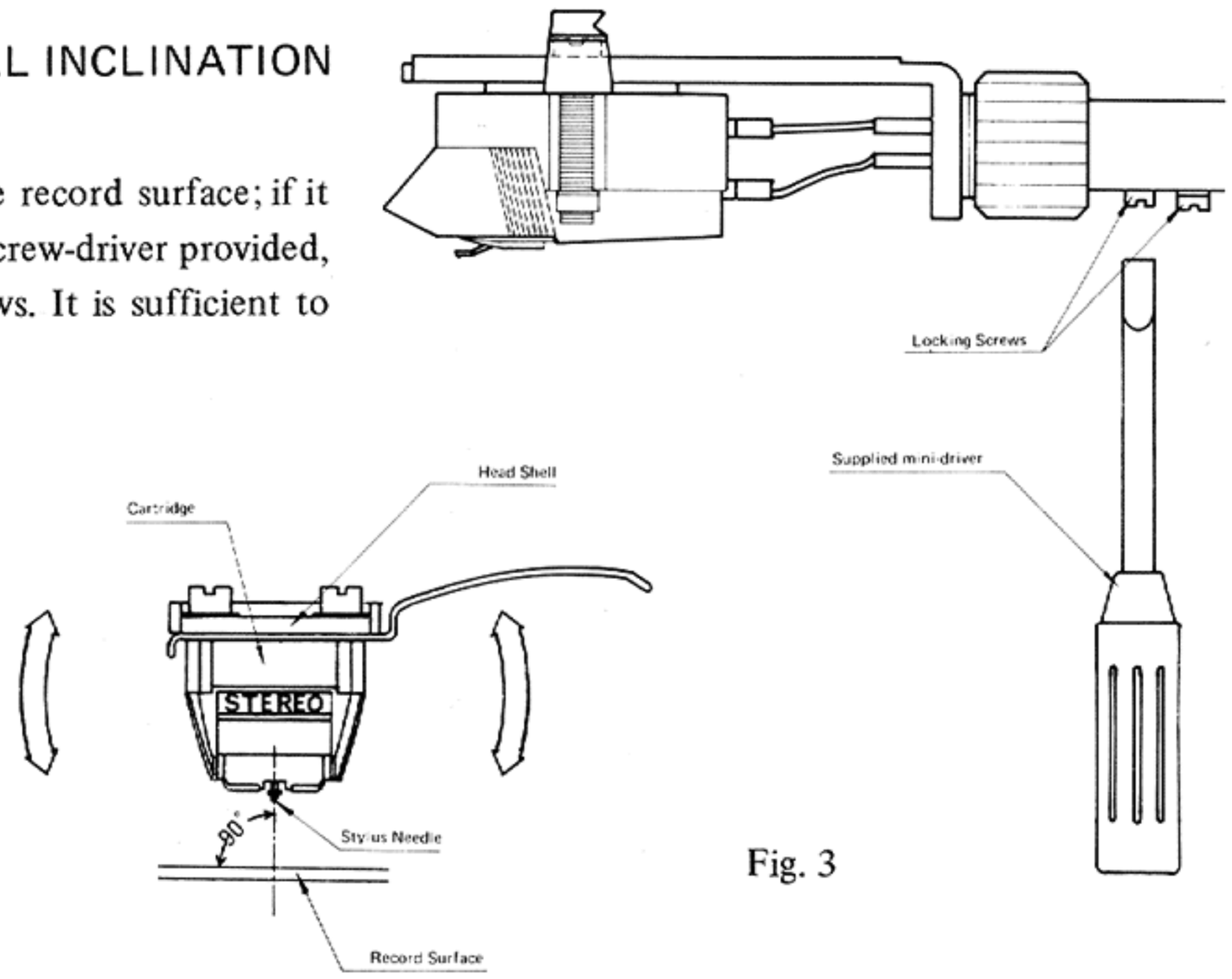
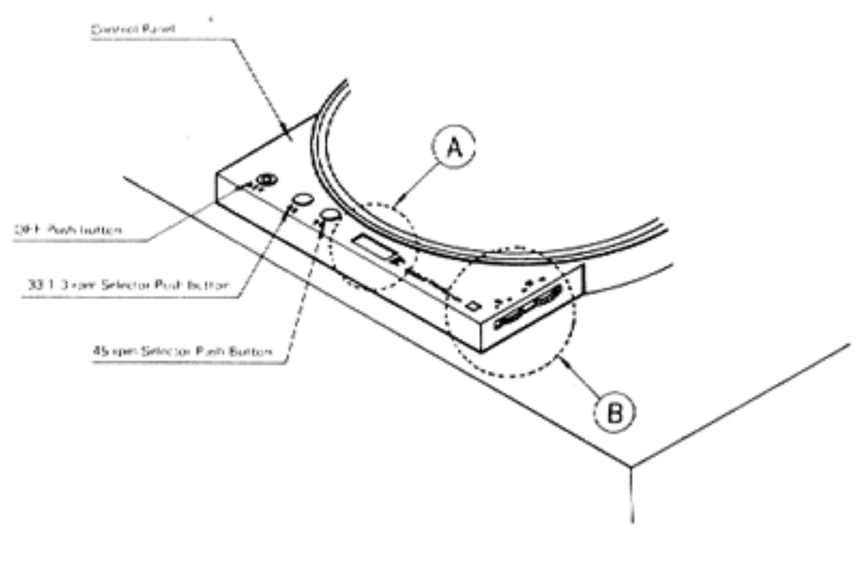


Fig. 3

ADJUSTMENT OF SPEED (Fig. 4)

SPEED CHANGEOVER

To play a 33-1/3 rpm record press the 33 button; to play a 45 rpm record press the 45 button. When the OFF button is pressed the power is switched off and the turntable platter stops rotating.

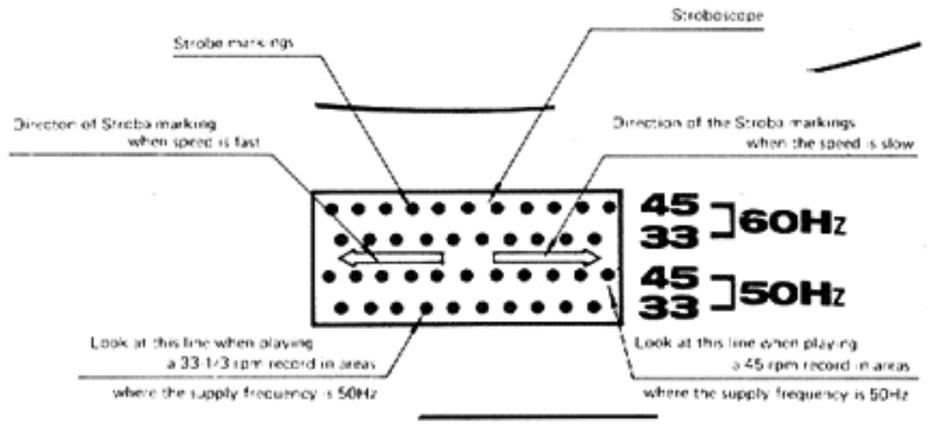


SPEED ADJUSTMENT

With either the 33 or 45 button depressed the speed can be fine adjusted with one of the two fine adjustment knobs. If they are turned in the F direction the speed will increase and if they are turned in the S direction it will decrease.

STROBOSCOPE

On the underside of the turntable platter there are four sets of dots which produce patterns in the stroboscope window. The four patterns correspond to areas where the power supply frequency is 50 Hz or areas where it is 60 Hz and the two speeds of 33-1/3 and 45 rpm. The pattern which must be observed will differ with area and record being played.


Stroboscope
Strobe markings
Direction of Strobe marking when speed is fast
Direction of the Strobe markings when the speed is slow
45
33
60Hz
45
33
50Hz
Look at this line when playing a 33-1/3 rpm record in areas where the supply frequency is 50Hz
Look at this line when playing a 45 rpm record in areas where the supply frequency is 50Hz

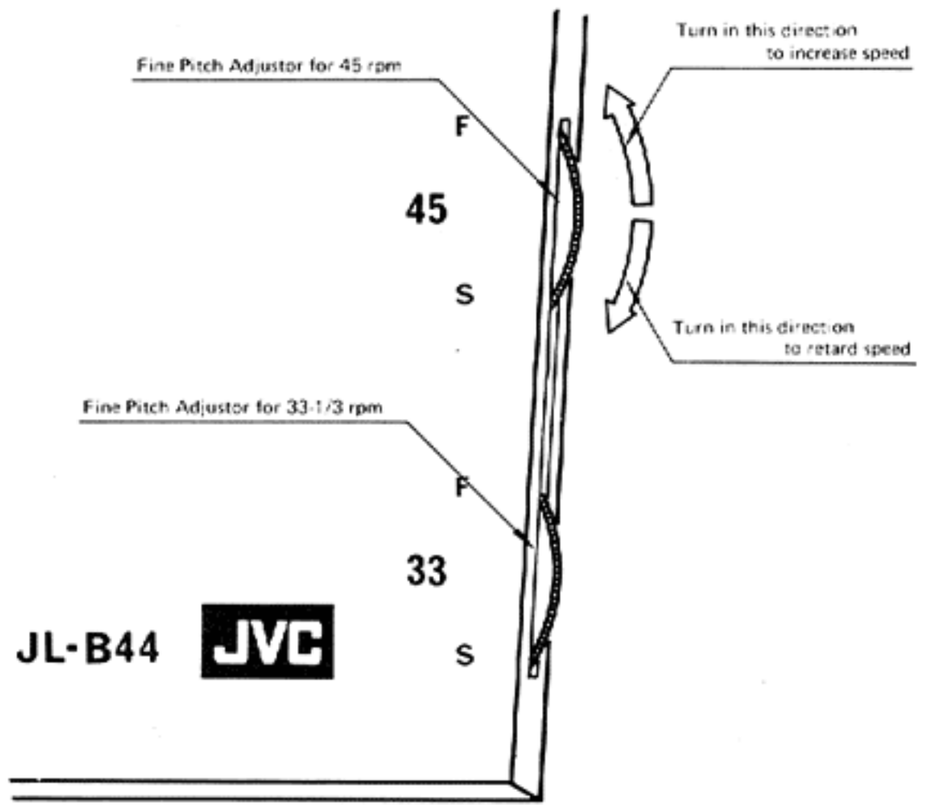


Fig. 4

REPLACEMENT OF PARTS

CARTRIDGE REPLACEMENT (Fig. 5)

The cartridge connections are shown in Fig. 6. When mounting a cartridge loosen the mounting nuts and bolts, adjust the overhang (see Fig. 7) and then tighten securely.

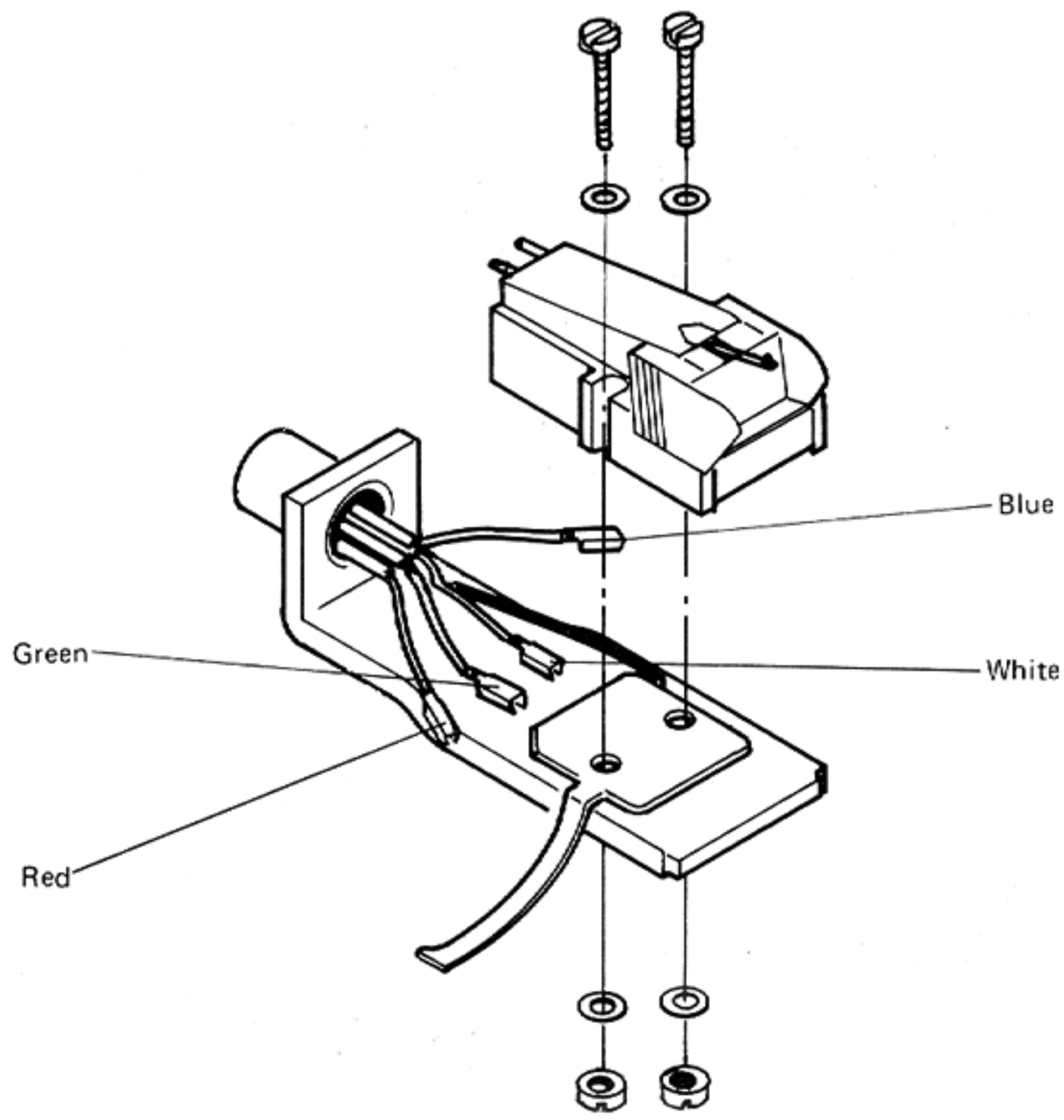


Fig. 5

OVERHANG ADJUSTMENT (Fig. 6)

Fit the 45 rpm adapter provided onto the turntable shaft. There is a circle on the adapter with a diameter of 3 cm. The cartridge mounting bolts should be loosened and the cartridge slid backwards of forwards so that the stylus tip is above the circle. It does not matter if there is an error of 2 ~ 3 mm in this positioning.

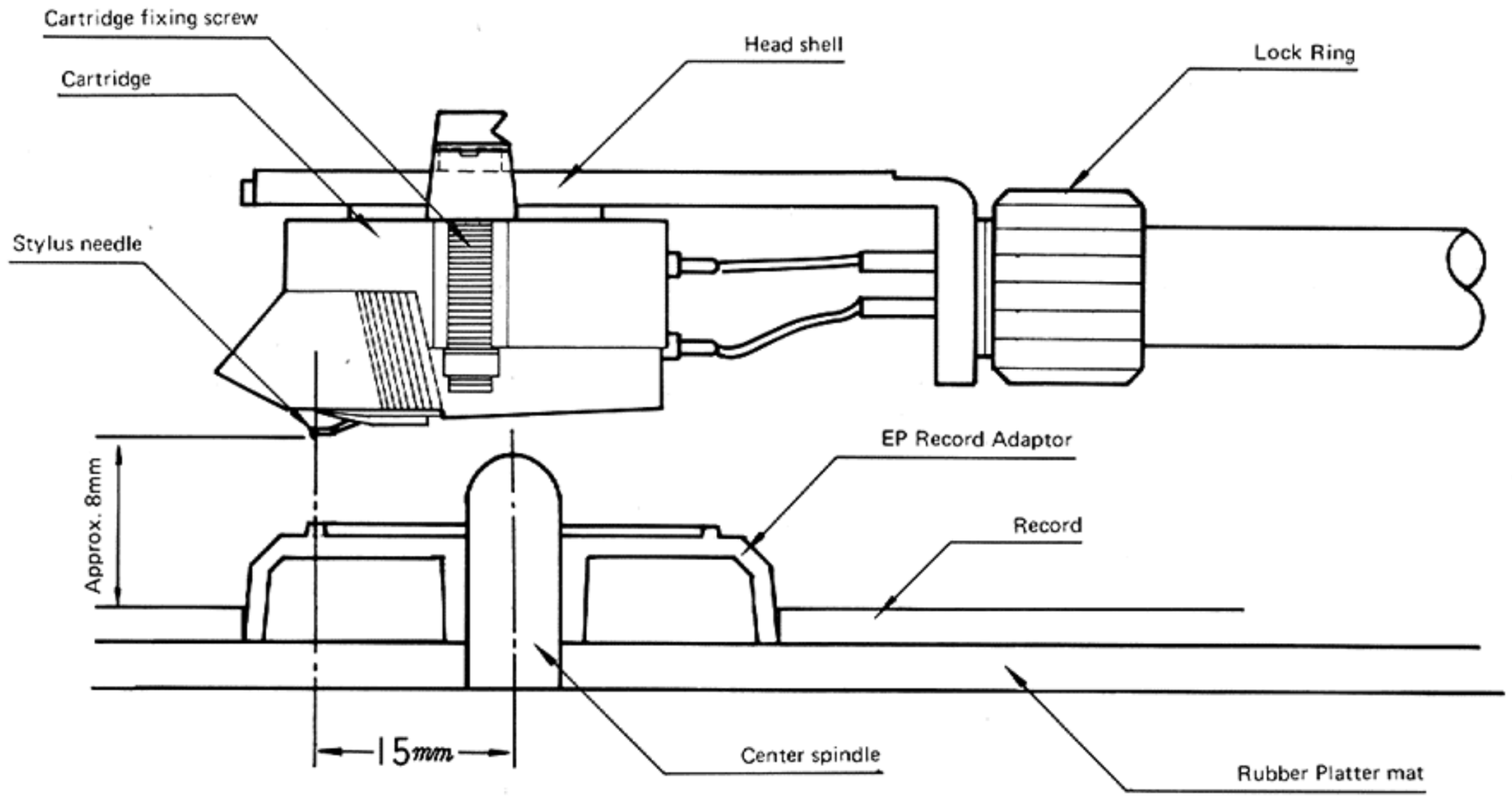


Fig. 6

CUEING HEIGHT ADJUSTMENT (Fig. 7)

When the cueing mechanism has lifted the arm there should be a clearance of around 8 mm between the stylus tip and the record surface. If this is incorrect records cannot be played. With a screwdriver loosen the screws on the lifter bracket while the cueing lever is in its up position and move the lifter up or down till the correct clearance is obtained and then retighten the fixing screws.

ADJUSTING TONEARM HEIGHT (Fig. 7)

When different cartridges we used the difference in height between the stylus tip and the center of the tonearm will be different. In this case the height of the tonearm can be varied. Loosen the tonearm height adjust screws and adjust the height of the arm so that it is parallel with the turntable platter or is slightly inclined towards the stylus. Retighten the screws.

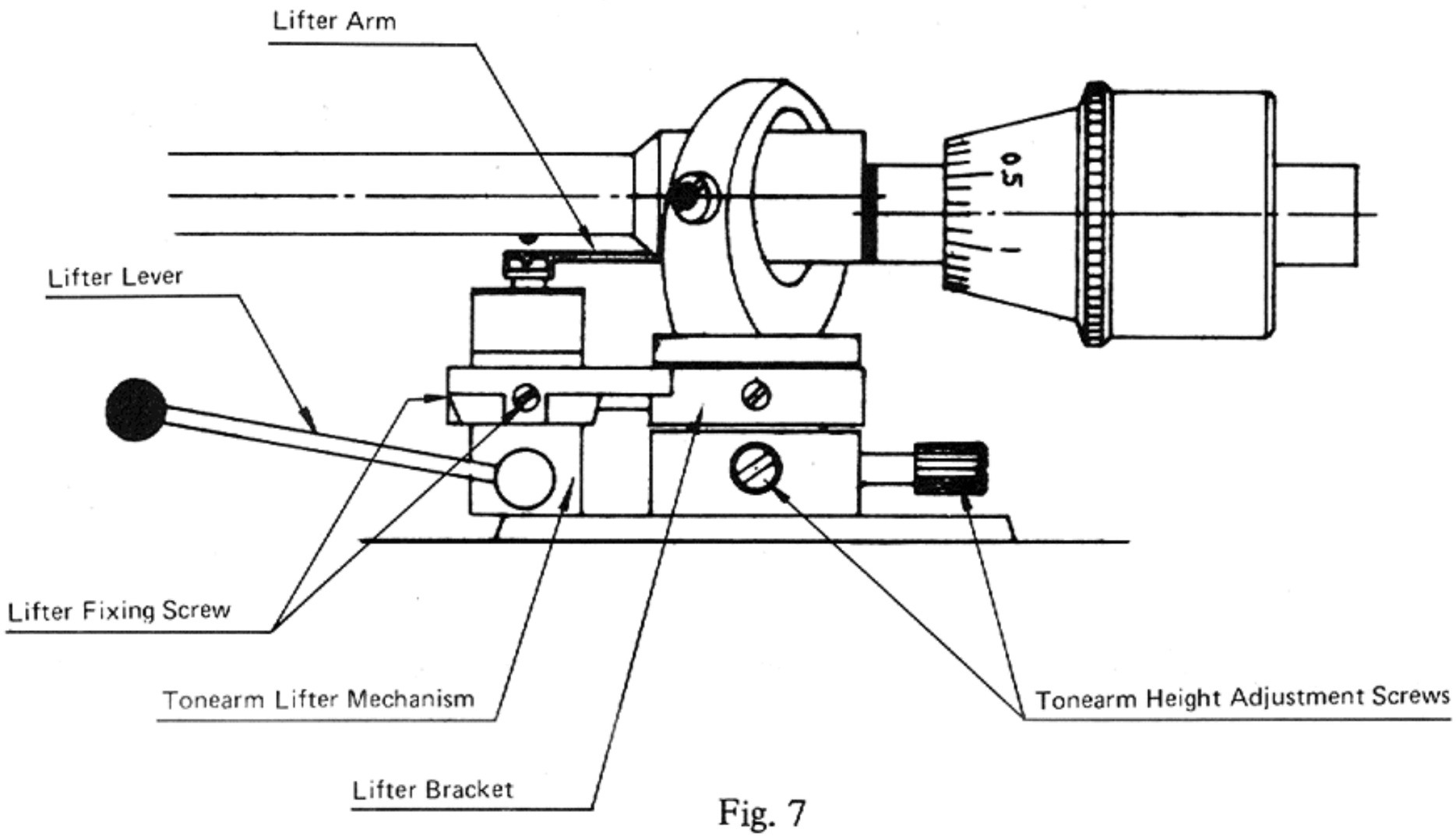


Fig. 7

USE OF HEAVIER CARTRIDGES AND HEADSHELLS (Fig. 8)

If the cartridge/headshell used is too heavy for zero balancing with the main weight on its own, fit the sub-weight provided as shown in Fig. 9.

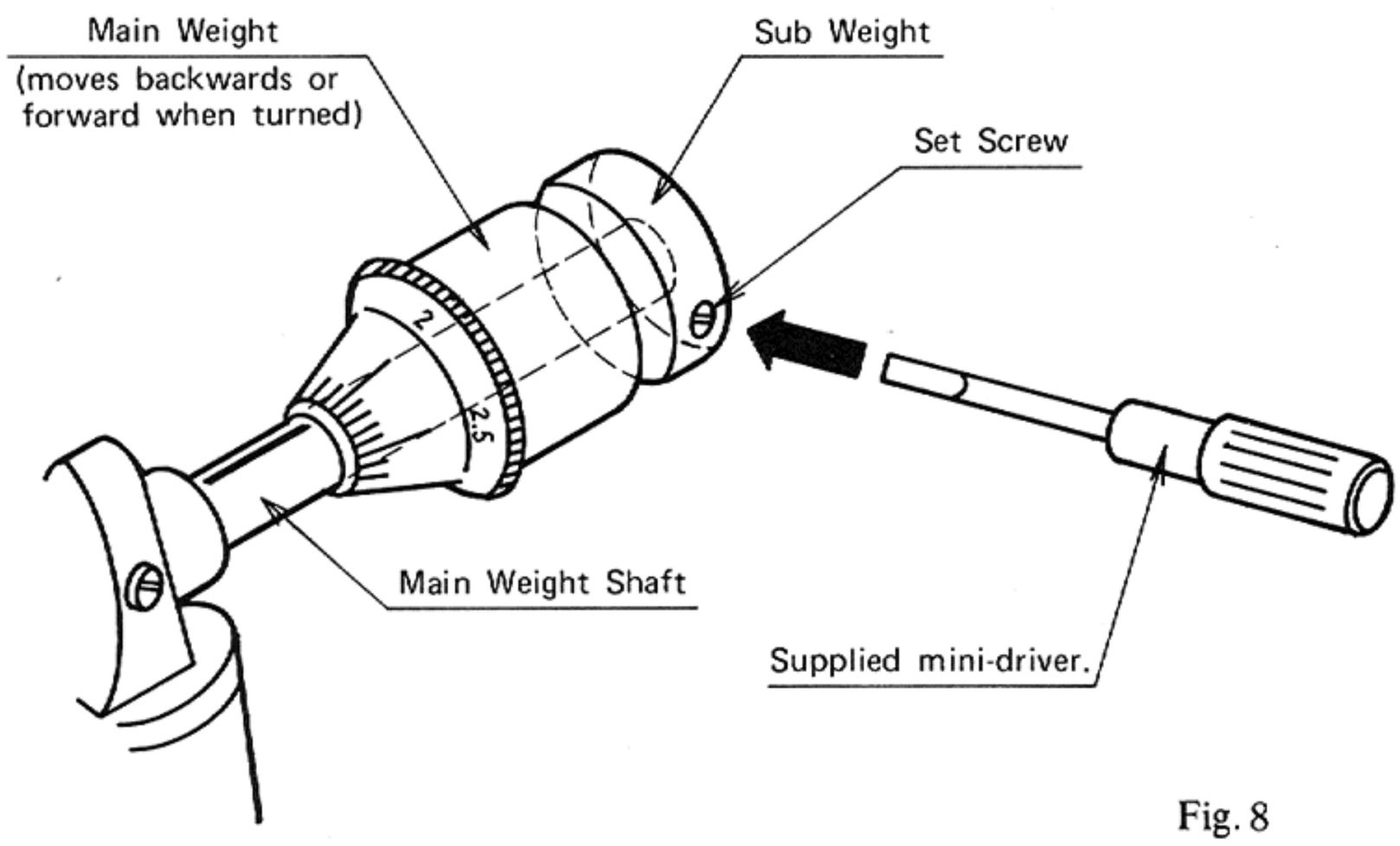


Fig. 8

SERVICING HINTS

Problems	Causes	Remedial Action
1. Turntable platter does not move when power is switched on	1. No current going to motor	• Switch defective – replace • Power cord connection incorrect or incorrectly soldered – reconnect or resolder • Correct connection forgotten – connect
	2. Motor defective	• If 16.5～17.5V DC is applied to the motor terminal and it does not work, replace the motor
	3. Speed control section defective	• Check that the lead wire is correctly connected to the speed control variable resistor • Variable resistor defective – replace
2. Turntable speed slow	1. DC power supply incorrect	• Is voltage at motor terminal 16.5～17.5V?
	2. Speed adjustment variable resistor defective	• See if normal speed is obtainable by adjusting variable resistor
3. Turntable speed fast	1. DC power supply incorrect	• Is voltage at motor terminal 16.5～17.5V?
	2. Speed adjustment variable resistor defective	• See if normal speed is obtainable by adjusting variable resistor
	3. Speed control section defective	• Speed control variable resistor is defective
4. Record plays but no sound is heard or sound is only heard from left or right speaker	1. Cartridge defective	• Replace cartridge
	2. Wiring incorrect	• Check wiring • Check signal cord connections
	3. Stylus damaged	• Replace stylus
	4. Amplifier malfunction	

Problems	Causes	Remedial Action
5. The stylus will not track the record groove correctly	1. Stylus clogged with dust	• Clean the stylus tip
	2. Stylus tip damaged	• Replace stylus
	3. Cords in tonearm too tight or sticking	• Check and slacken cords
	4. Too low stylus pressure	• Readjust stylus pressure
	5. Friction in pick-up bearing too great	• Replace pick-up
6. The turntable platter does not stop when the power is turned off	1. Switch defective	• Replace switch
	2. Incorrect wiring	• Check wiring
7. Noise is heard while record is playing	1. Motor rumble	• Check if any part of motor is touching anything else • Replace motor
	2. Turntable platter in contact with motor board	• Replace turntable platter • Replace motor bracket

*** JVC 4MD-20X and 4MD-10X (Cartridges) will be recommended to you for this record player.**

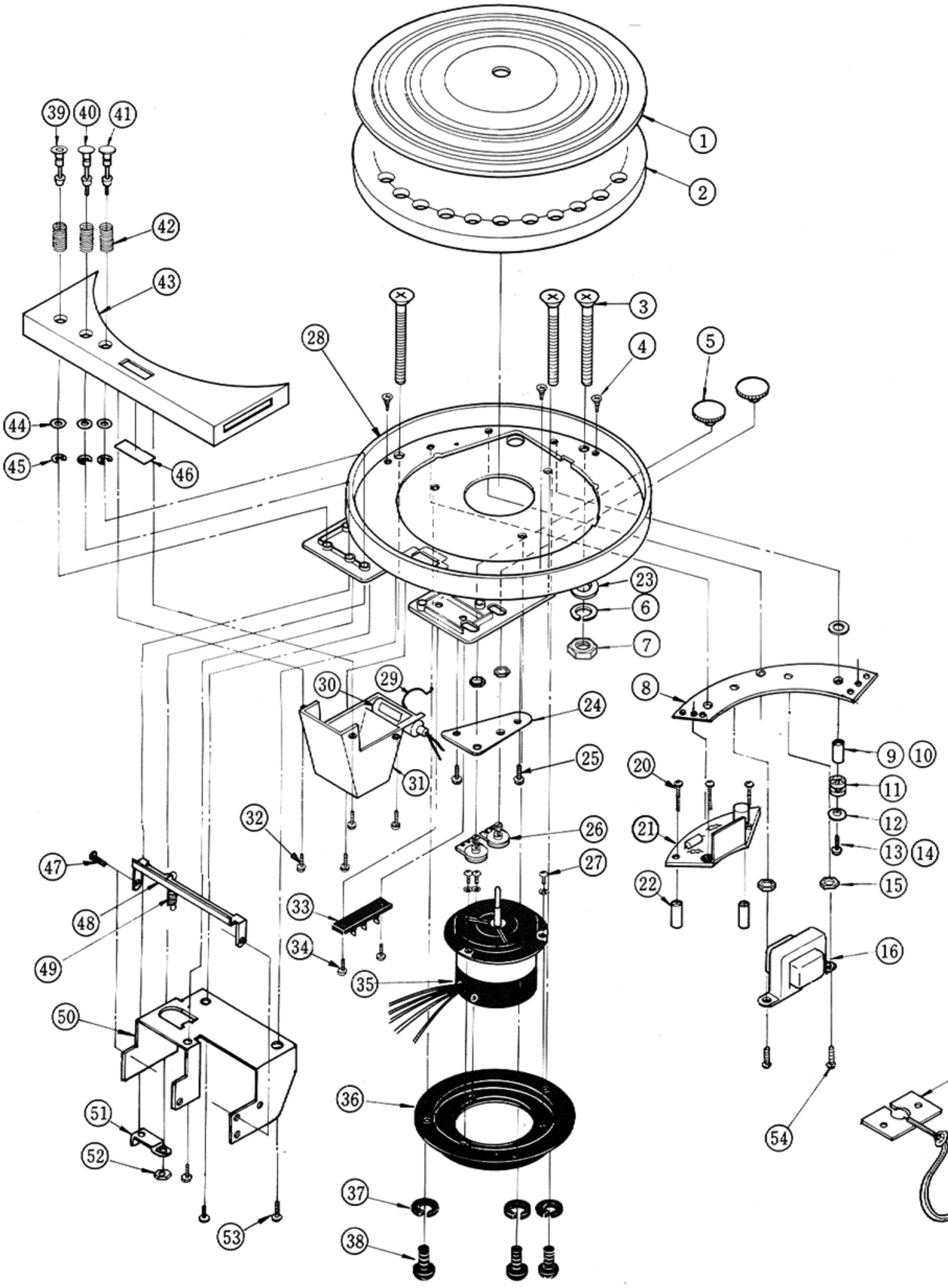

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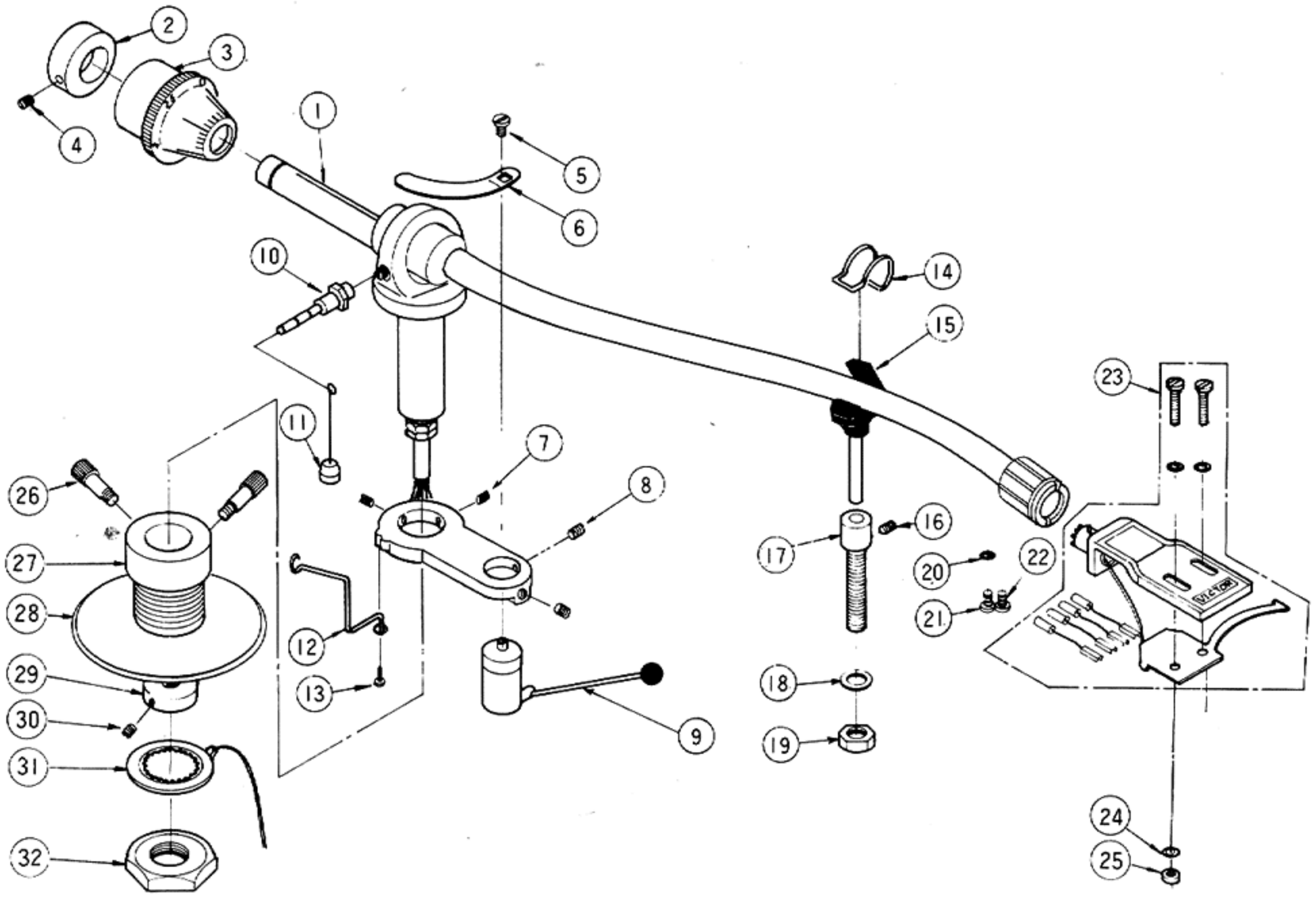
Fig. 9

No.	Parts No.	Parts Name	Reference
1	E21379-001	Platter Mat	
2	E21378-001	Turntable Platter	
3	SSP6075ZS	Screw	
4	MSSP3116Z	Wood Screw	
5	G41125	Volume Knob	
6	WLS6000M	Spring Washer	
7	NNZ6000ZS	Nut	
8	EG10625-003	Bracket	
9	E0305-28	Tube Spacer	
10	E0305-49	Tube Spacer	
11	52992	Rubber Bushing	
12	Q03091-109	Washer	
13	LPSP4030ZS	Screw	
14	LPSP4025ZS	Screw	
15	NNZ4000ZS	Nut	
16	E03032-18B	Trans	
17	EG10500	Stopper Plate	
18	E31704-003	Power Cord Stopper	
	E31704-002	Power Cord Stopper	for Austraria and U.K. only
19	QMP1200-244	Power Cord	
	E03551-002	Power Cord	for Austraria and U.K. only
	E03544-001	Power Cord	for SEMKO only
	Q03062-3	Power Cord	for SEV only
20	LPSP3020ZS	Ass'y Screw	
21	TAP-229A	Circuit Ass'y	for U.S.A. only
	TAP-229B	Circuit Ass'y	for Other Country
	TAP-229C	Circuit Ass'y	for Europe only
22	E0305-42	Tube Spacer	
23	WNS6000Z	Washer	
24	G41107	Volume Bracket	
25	LPSP4006ZS	Ass'y Screw	
26	QVF1A2B-013	Volume	
27	LSPS4008MS	Screw	
28	E1781-002	Motor Board	
29	G41111	Lock Spring	
30	QLN1601-004	Neon Lamp	
31	E33554-001	Mirror Box Ass'y	
32	LPSP3006ZS	Screw	
33	T42693-00B	Terminal Board	
34	LPSP3008ZS	Ass'y Screw	
35	E03580-001	Direct Servo Motor	
36	E33548-001	Motor Bracket	
37	WLS6000M	Spring Washer	
38	SPSP6008M	Screw	
39	E33661-002	Shaft Ass'y	
40	E33661-004	Shaft Ass'y	
41	E33661-006	Shaft Ass'y	
42	G41126-001	Coil Spring	
43	E33547-002	Control Panel	or E33547-001
44	E49303	Rubber Washer	
45	REE3000	E Ring	
46	G41112	Strobo Plate	
47	E44865-002	Screw	
48	E49108-001	Stopper	
49	E49109-001	Coil Spring	
50	E33667-001	Switch Bracket	
51	G41129	Lever	
52	NNZ3000ZS	Nut	
53	LPSP4006ZS	Screw	
54	LPSP4025ZS	Screw	
55	T41479-00B	Terminal Board	Voltage Select
56	E03541-002	Micro Switch	AM4100
57	QSU3V60-002	Micro Switch	AM43009
	E03538-001	Micro Switch	for SEMKO, SEV only



SHEMATID DIAGRAM

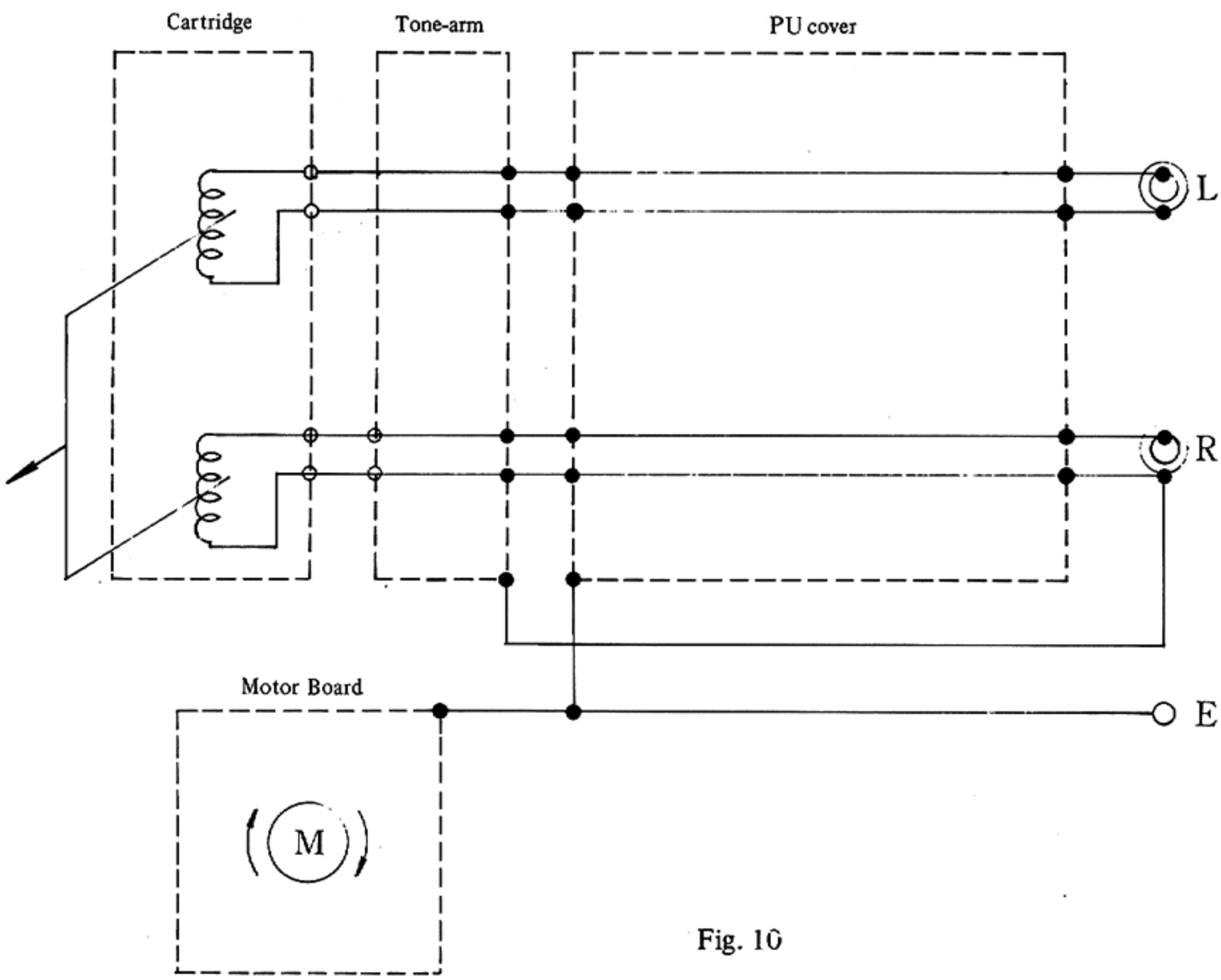


Fig. 10

PICK-UP

No.	Parts No.	Parts Name	Reference
1	EG80246	Tone-Arm Body	
2	EG83363	Sub Weight	
3	EG81647	Main Weight	
4	TRS3008ZS	Screw	
5	SSB2004N	Screw	
6	EG81490	Lift Arm	
7	YRS4004S	Screw	
8	TRS3003ZS	Screw	
9	EG81646	Lift Ass'y	
10	EG83228	Anti Skating Bar	
11	EG83365	Anti Skating Weight Ass'y	
12	EG81494	Anti Skating Stand	
13	SPB2003N	Screw	
14	EG83266	Clamp	
15	EG83265	Arm Rest	
16	TFB3004NS	Screw	
17	E48808-003	Rest Stand	
18	WNS6000Z	Washer	
19	NNZ6000Z	Nut	
20	WLS1700N	Washer	
21	SPB1703N	Screw	
22	SPB1402N	Screw	
23	EG81500G	Head Shell Ass'y	
24	EG83388	Washer	
25	EG83143B	Nut	
26	EG83227	Screw	
27	EG81704-002	Base	
28	EG83340	Base Washer	
29	EG83336	Stopper	
30	TRS3003ZS	Screw	
31	EG83370	Washer Ass'y	
32	EG83235	Nut	

TAP-229A, 229B, 229C POWER CIRCUIT ASS'Y

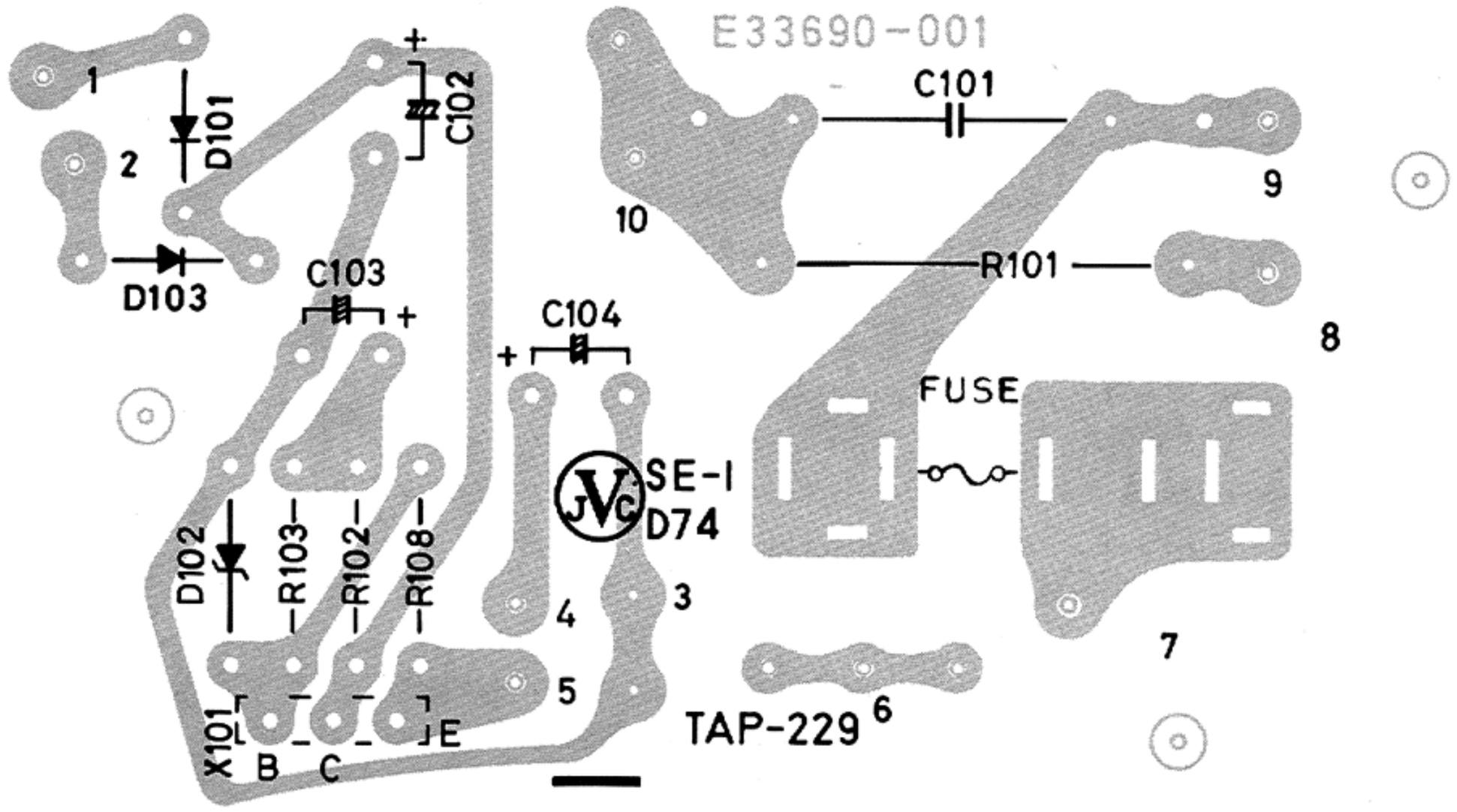


Fig. 11

No.	Parts No.	Parts Name	Reference
1	2SC1173Y	Transistor	X101
2	S1B01-02	Diode	D101, D103
3	E0771-20	Zener Diode	D102
4	E46728-001	Insulator Film	
5	E41541-16	Spacer	
6	QRD141J-332	C. Resistor	R102
7	QEW41HA-477	E. Capacitor	C102
8	E33690-001	Circuit Board	
9	QRG031K-392	O. M. Resistor	R101
10	QFH72EM-473	M. M. Cap.	C101 (For U.S.A.)
	QFH53AM-103	M. M. Cap.	C101 (For U.S.A.)
	QFZ9006-103	M. P. Cap.	C101 (For Europe)
11	QRD141J-391	C. Resistor	R103
12	E45524-001	C. Clip	
	E48965-001	C. Clip	(For Europe)
13	E47925	Heart Sink	
14	QRD141J-152	C. Resistor	R108
15	E43727-002	Tab	
16	NNZ3000	Nut	
17	LPSP3008ZS	Screw	
18	LPSP3012ZS	Screw	
19	QEW41VA-477	E. Capacitor	C104
20	QEW41VA-107	E. Capacitor	C103

CABINET

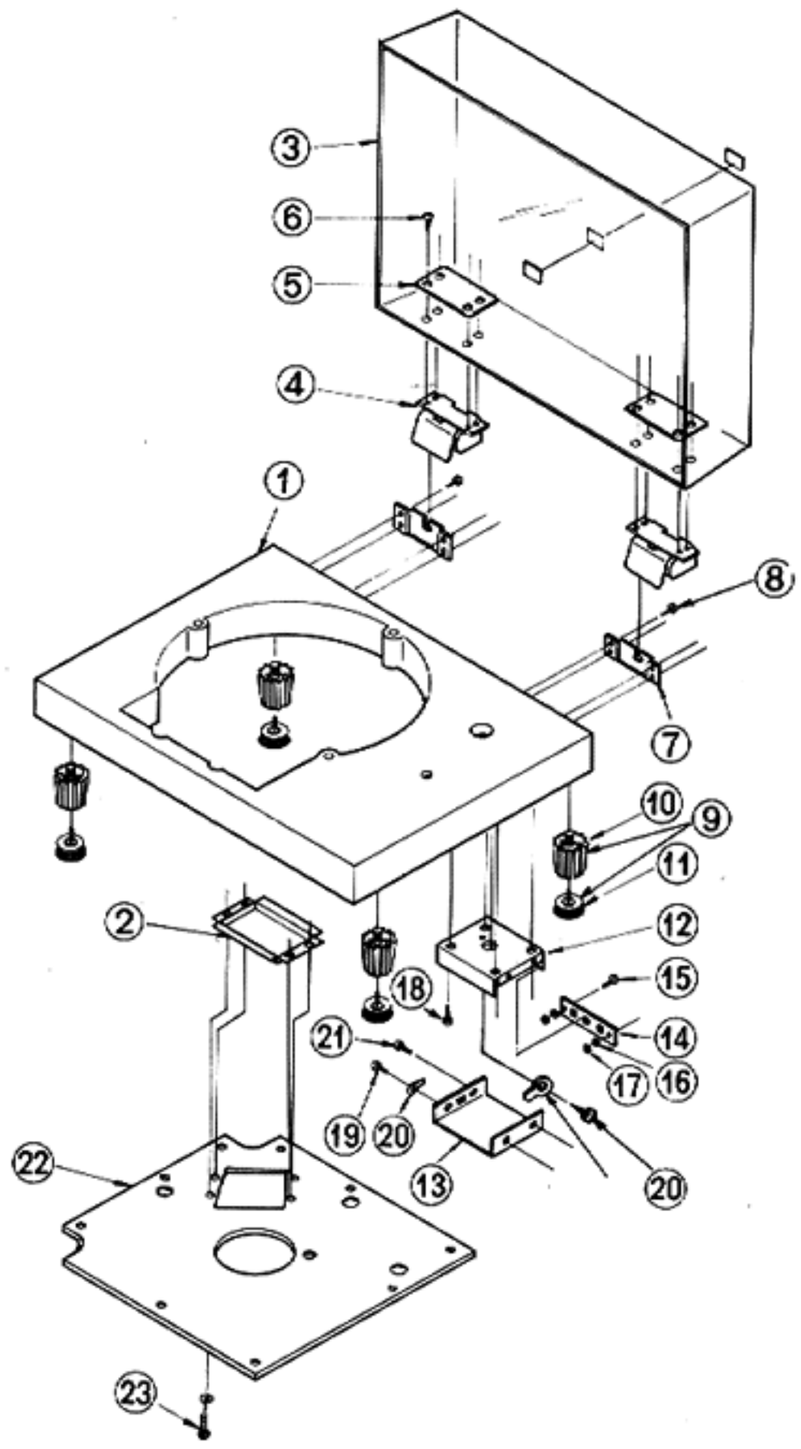


Fig. 12

No.	Parts No.	Parts Name	Reference
1	ED92467	Wood Base	
2	E46484-001	Protector	
3	D20408-912	Dust Cover Ass'y	
4	ED35330-001S	Hinge Ass'y	
5	ED42992-001	Plate	
6	SHSP3016RS	Screw	
7	ED42991-001	Lock Plate	
8	MRSP2710N	Wood Screw	
9	E33179-003	Foot Ass'y	
10	E48824-001	Foot Body	
11	E48825-001	Foot	
12	E33545-001	PU Cover (A)	
13	E33546-001	PU Cover (B)	
14	E03530-001	Pin Jack Ass'y	
15	LPSP3008MS	Screw	
16	WNS3000M	Washer	
17	NNZ3000ZS	Nut	
18	MRSP3112M	Wood Screw	
19	SBSB3008Z	Tapping Screw	
20	52868-3	Lug Fasten	
21	SBSB3008Z	Tapping Screw	
22	E21509-001	Bottom Board	
23	MRSP3116M	Wood Screw	

PACKING ASS'Y

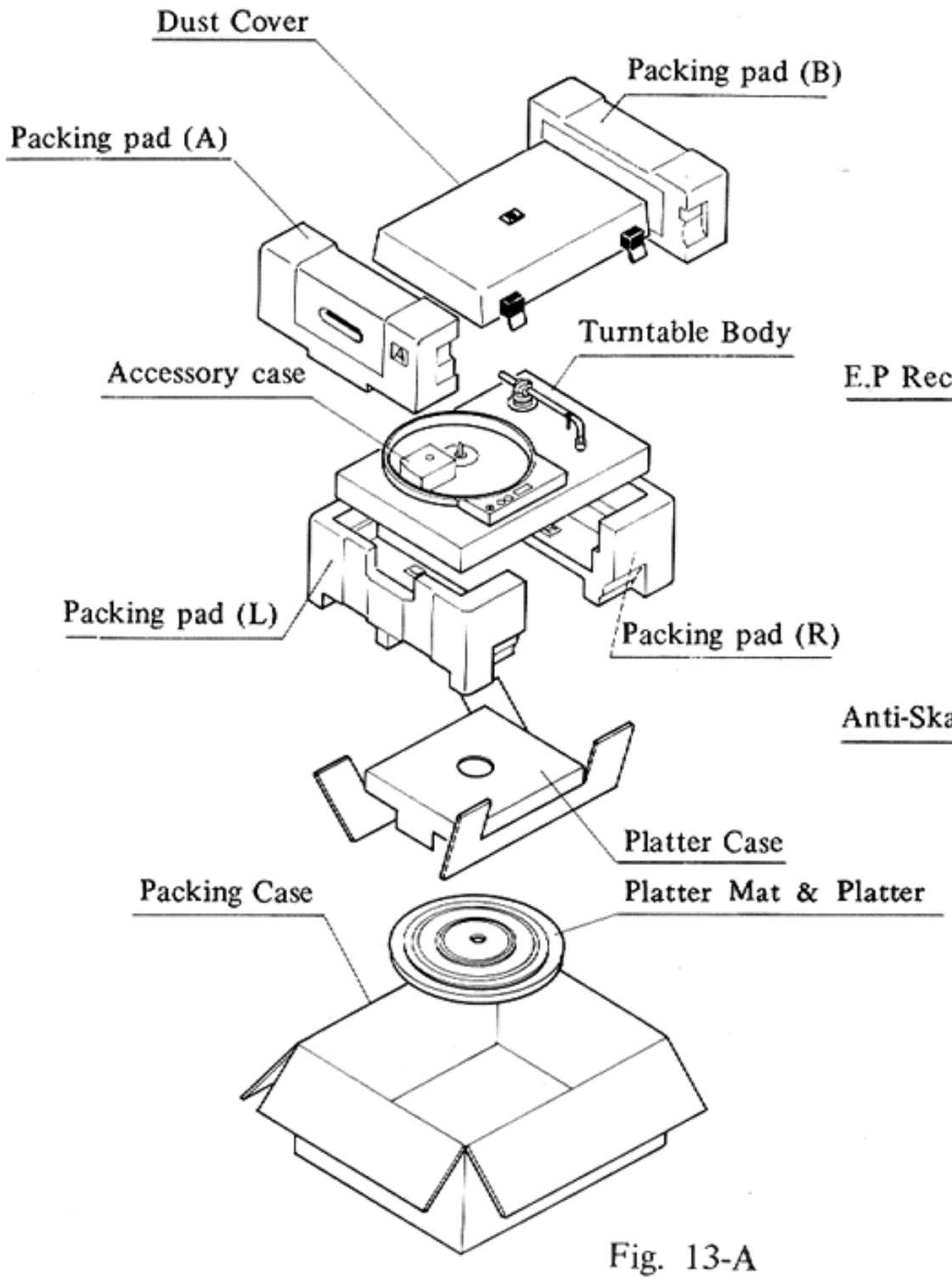


Fig. 13-A

ACCESSORIES

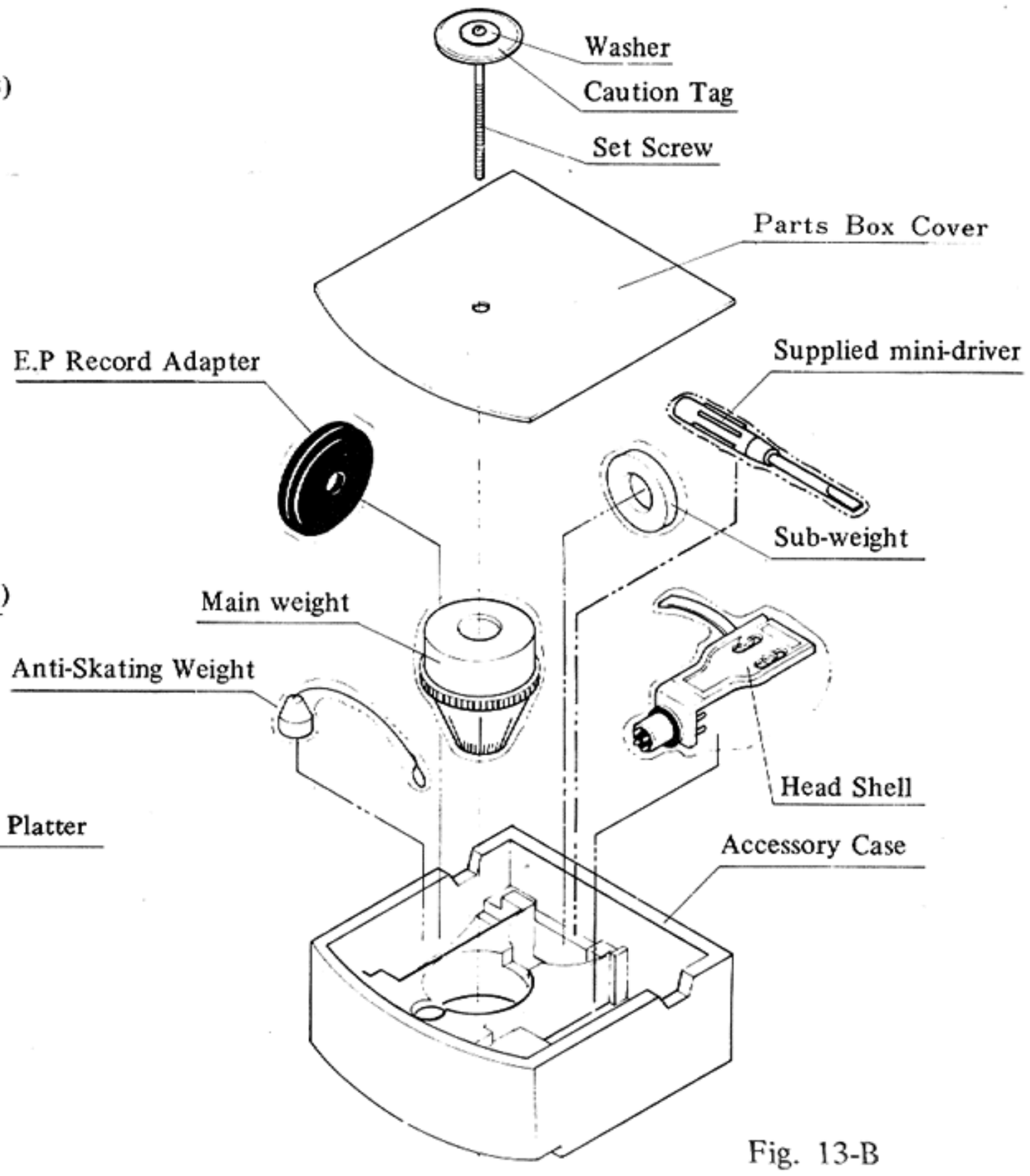


Fig. 13-B

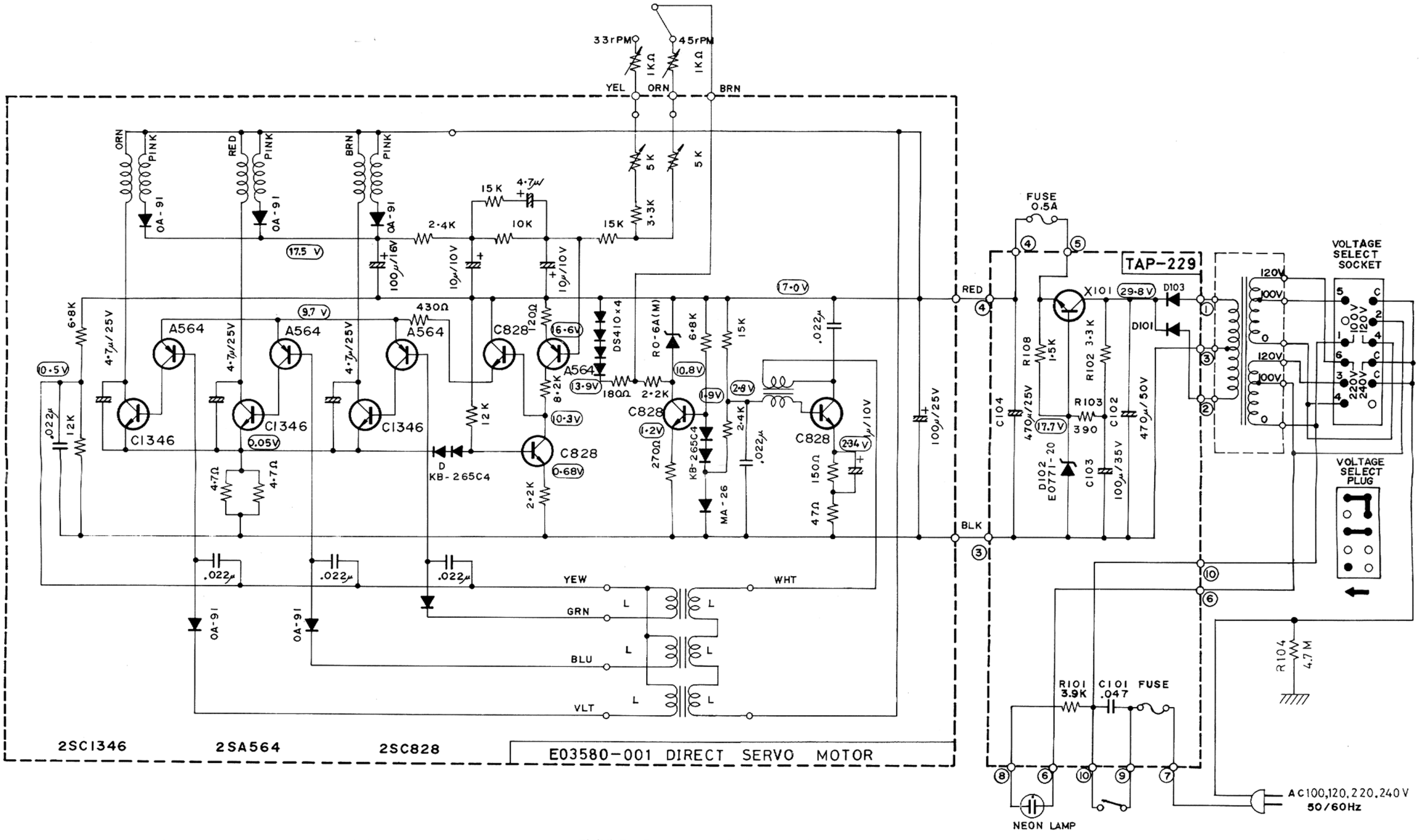
PACKING ASS'Y

No.	Parts No.	Parts Name	Reference
1	JL-B44-PK	Carton Case	
2	JL-B44-NZ	Packing Materials	
3	E38212-112	Parts Box Ass'y	
4	E48136-001	Parts Box Cover	
5	SPS4060ZS	Screw	
6	Q03091-113	Washer	
7	G6771	Caution Label	

ACCESSORIES

No.	Parts No.	Parts Name	Reference
1	E64103-001	Polishing Cloth Ass'y	
2	E30580-435A	Instruction Book	
3	QMF60R1-R25	Fuse	0.25A
	QMF60R1-R50	Fuse	0.5A
4	E33210-002	Signal Cord Ass'y	
5	E32907-082	Fact Tag	only U.S.A.

SCHEMATIC DIAGRAM



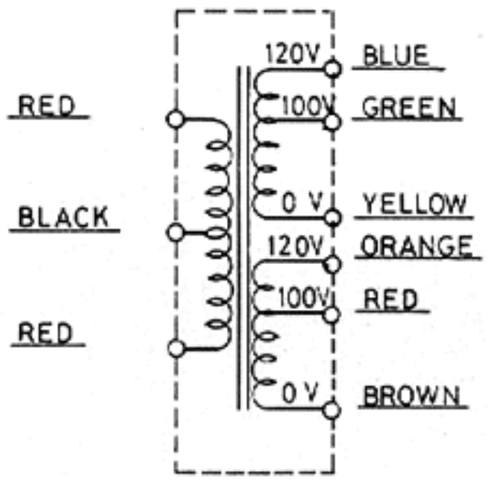
This Schematic Diagram. is for (P) (U).
note: The primayr circit and parts of the other circuits are slightly different from this diagram in other aveas. Therefore please see the schematic diagrams shown on the back page.

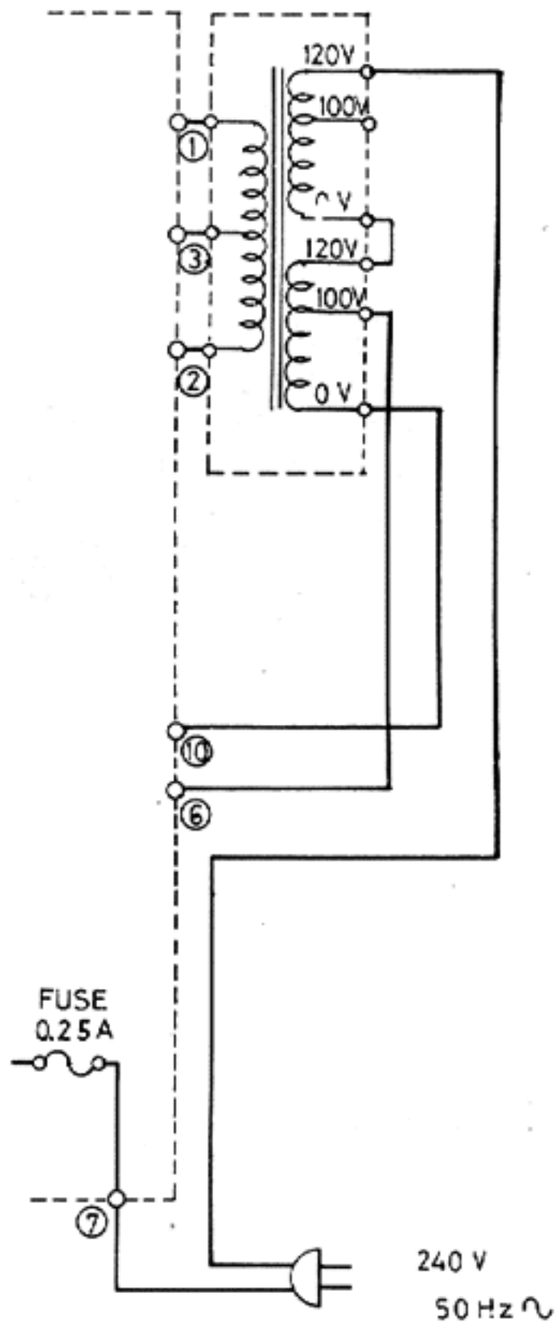
(P) (U) For Pacex, nex, and other countries.
· Primary circuit (AC 100, 120, 220, 240V 50/60Hz).

Fig. 14

POWER CIRCUIT SECTION

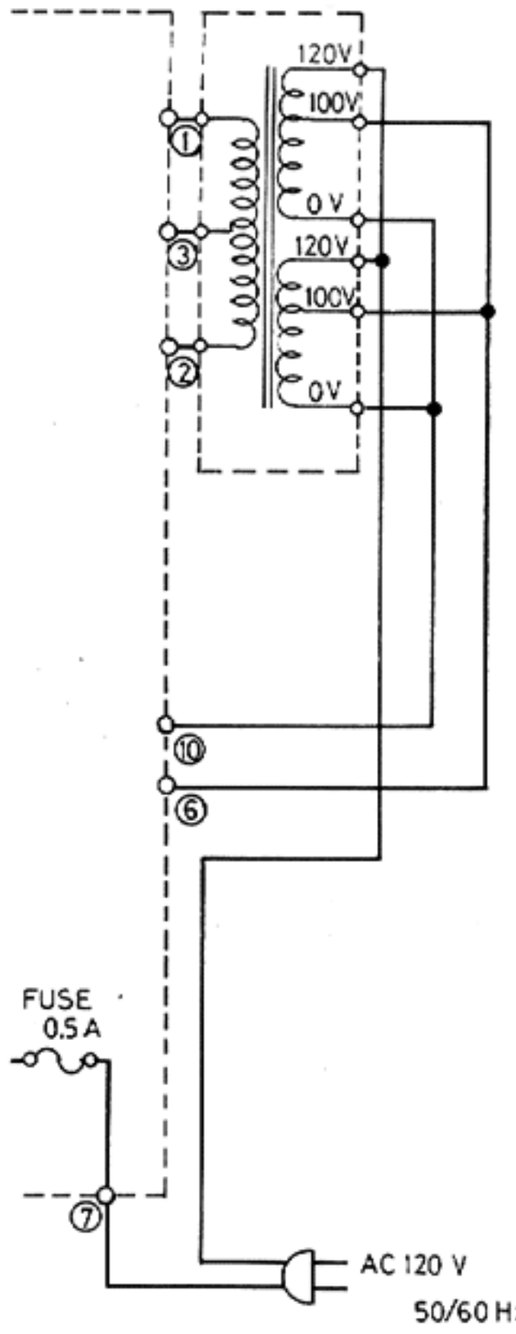
POWER TRANS





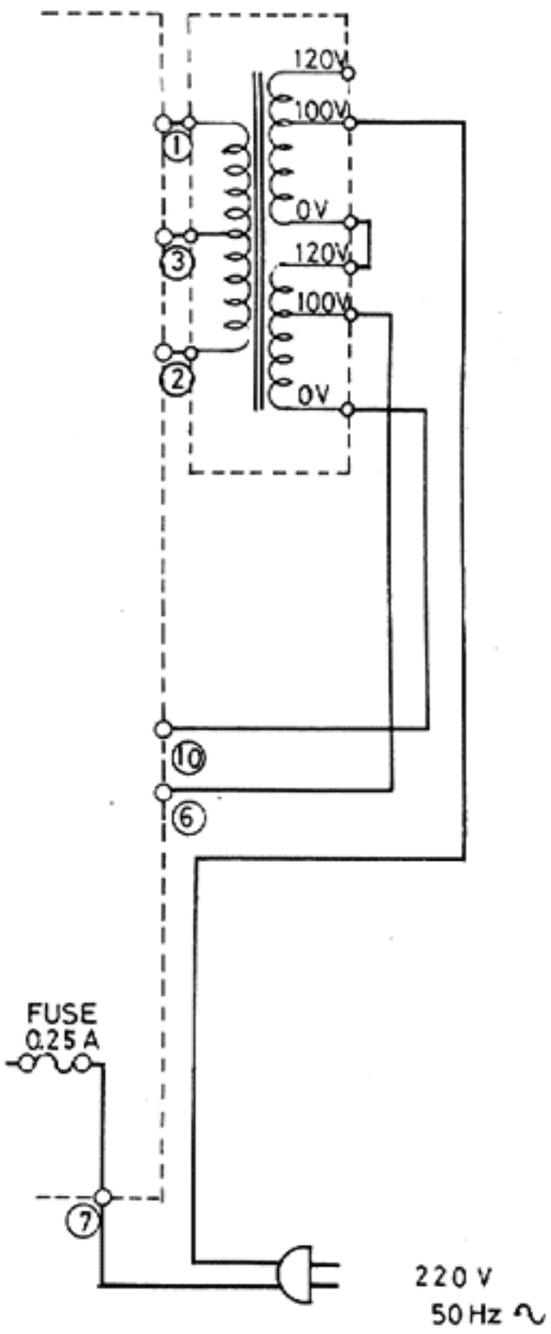
(A) FOR AUSTRARIA AND U.K.

· Primary circuit (240T. 50Hz ~).



(J) FOR U.S.A.

· Primary circuit (AC 120V 50/60Hz ~).



(E) FOR EUROPE.

· Primary circuit (220V 50Hz ~).

Fig. 15

THE LIST OF JVC SERVICE MANUAL

No.	Model	No.	Model	No.	Model	No.	Model
2231	CD4-1E	2241	4344U (R#-2)	2251	VR-5501	2261	VS-5307
2232	SRP-473E	2242	MS-4431, 4311U	2252	VN-5101	2262	VR-5511
2233	N-401FMY #3	2243	MF-4440	2253	VS-5308	2263	4DD-10
2234	SEA-V7E	2244	MF-4451	2254	VS-5332	2264	5911
2235	MSL-502ES	2245	QSL-F777E	2255	VS-5352	2265	VT-700
2236	VS-5391	2246	MF-4430	2256	VS-5342	2266	4ME-4801
2237	VS-5396	2247	4MM-4000	2257	VS-5322	2267	VS-5399
2238	5520/5520U	2248	VR-5501L	2258	VR-5541	2268	4VN-770
2239	VR-5521L	2249	VR5921	2259	VR-5551	2269	VP-100
2240	4ME-4800	2250	4VR-5445	2260(B)	4VR-5414	2270	VB-100

No.	Model	No.	Model	No.	Model	No.	Model
2271	VN-700	2281	4VN-990	2291	VR-5660	2301	4ME-4804
2272	4MD-10X	2282	N-404FMY-4	2292	N-303FYE-2, N-203FY-2	2302	4MM-4604
2273	VP-10, VB-10	2283	4MM-1000	2293	SK-4430	2303	SEA-10
2274	VS-5313	2284	4VN-880	2294	VL-8	2304	5944
2275	VN-900	2285	CSL-135E	2295	MF-4451U	2305	VS-5323
2276	GB 1ED	2286	VN-300	2296	4VC-5244	2306	VS-5333
2277	MSL 602L	2287	MF-4430U	2297	5844	2307	SX-3
2278	MSL-302L	2288	4MD-20X	2298	VC-9	2308	4VR-5404
2279	4VN-550	2289	4DD-5	2299	VS-5397	2309	VR-5505
2280	VT-500	2290	VT-900	2300	4VR-1006	2310	DF-19E

No.	Model	No.	Model	No.	Model	No.	Model
2311	SK12	2321	4VR-5456	2331	VR-5525X		
2312	SK15	2322	4FE-4324	2332	VR-5515X		
2313	VL-5	2323	VR-5535	2333	4VR5436X		
2314	4VR-5446	2324	VR-5535L	2334	VR-5535X		
2315	4VR-5436	2325	MC-4001	2335	JL-B44		
2316	VR-5515	2326	GX500E				
2317	VR-5515L	2327	SX-5				
2318	VR-5505L	2328	JS-6				
2319	VR-5525	2329	JL-A3				
2320	VR-5525L	2330	JS-4				

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